

FEDERAL COMMUNICATIONS COMMISSION

CLASS OF STATION FM

LCJ

The following application is submitted for action by the Chief, Broadcast Bureau.

ST	FILE NUMBER	CALL	APPLICANT AND LOCATION	NATURE OF APPLICATION
OR	BPED -920630ME N/M	KSKF 90.9MHZ	ST OF OR ACT BY ST BOARD OF HIGH ED KLAMATH FALLS OR	CP TO MAKE CHANGES: ERP: 6.5 KW (H) 2.00 KW (V)
		WLO-417	KLAMATH FALLS	OR
		WLO-415	ASHLAND	OR
		WLO-420	KLAMATH FALLS	OR

LICENSE EXPIRATION DATE

P.N. 7-9-92

CHIEF, LICENSE DIVISION

RECOMMENDATION: GRANT( ) CONSTRUCTION DATES, START END

CONTESTED ( ) UNCONTESTED ( )

ESR 7.28.92

APPROVED

FOR CHIEF, BROADCAST BUREAU

F.C.C.-WASHINGTON, D.C.

# Oregon ORIGINAL

## STATE BOARD OF HIGHER EDUCATION

OFFICE OF THE SECRETARY

P.O. BOX 3175

EUGENE, OREGON 97403

(503) 346-5795

June 23, 1992

RECEIVED

Ms. Donna Searcy, Secretary  
Federal Communications Commission  
1919 M Street NW  
Washington, DC 20554

JUN 30 1992

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

RE: BMPED-88415MC  
Klamath Falls, OR  
KSKF

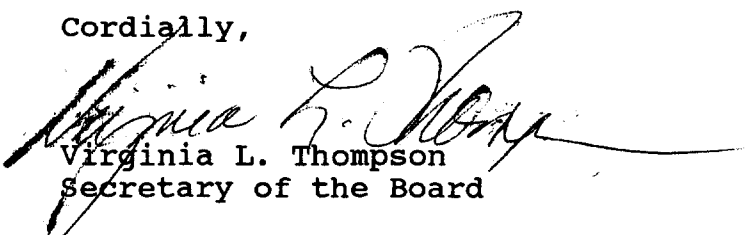
Dear Ms. Searcy:

On behalf of the State of Oregon Acting By and Through the State Board of Higher Education and for Southern Oregon State College, I am submitting two copies of FCC Form 340 requesting authority to increase the operating power of station KSKF(FM), Klamath Falls, OR.

I certify that KSKF operates as a non-commercial educational station, in accordance with 73.503 of the Commission's rules and that the broadcast services reported upon herein will be used solely on a non-commercial educational basis.

I claim exemption from any applicable fees under section 1.1112(d) of the Commission's rules.

Cordially,

  
Virginia L. Thompson  
Secretary of the Board

VLT:vs

Enc.

cc: Arter & Hadden  
Jerry Casby  
Ronald Kramer

RECEIVED  
JUN 21 11:32  
FBI EXAMINER'S

APPLICATION FOR CONSTRUCTION PERMIT FOR  
NONCOMMERCIAL EDUCATIONAL BROADCAST STATION  
(Carefully read instructions before filing form) Return only form to FCC

RECEIVED

Section I - GENERAL INFORMATION JUN 30 1992

For Commission Use Only

File No. BPED 920630 ME

1. Name of Applicant State of Oregon Acting by office of the SECRETARY the State Board of Higher Education and for Southern Oregon State College			Send notices and communications to the following person at the address below:		
Street Address or P.O. Box P.O. Box 3175			Name Virginia Thompson, Secretary State Board of Higher Education		
City Eugene	State OR	ZIP Code 97403	City Eugene	State OR	ZIP Code 97403
Telephone No. (Include Area Code) (503) 346-5796			Telephone No. (Include Area Code) (503) 346-5796		

2. This application is for: ☐ AM ☒ FM ☐ TV

(a) Channel No. or Frequency 90.9 FM	(b) Principal Community Klamath Falls	City Klamath Falls	State OR
-----------------------------------------	------------------------------------------	-----------------------	-------------

(c) Check one of the following boxes:

☐ Application for NEW station

☒ MAJOR change in licensed facilities; call sign: KSKF BMPED-88415MC

☐ MINOR change in licensed facilities; call sign: \_\_\_\_\_

☐ MAJOR modification of construction permit; call sign: \_\_\_\_\_

File No. of construction permit: \_\_\_\_\_

☐ MINOR modification of construction permit; call sign: \_\_\_\_\_

File No. of construction permit: \_\_\_\_\_

☐ AMENDMENT to pending application; application file number: \_\_\_\_\_

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. Is this application mutually exclusive with a renewal application? ☐ Yes ☒ No

If Yes, state:	Call letters	Community of License	
		City	State

90.9MHZ  
BPED -920630ME KSKF  
KLAMATH FALLS OR  
ST OF OR ACT BY ST BOARD OF HIGH EI

**SECTION VI - EQUAL EMPLOYMENT OPPORTUNITY PROGRAM**

1. Does the applicant propose to employ five or more full-time employees?

☐ Yes ☒ No

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Program Report (FCC 396-A).

**SECTION VII - CERTIFICATION**

1. Has or will the applicant comply with the public notice requirements of 47 C.F.R. Section 73.3580?

☒ Yes ☐ No

2. By checking Yes, the applicant certifies that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☒ Yes ☐ No

The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

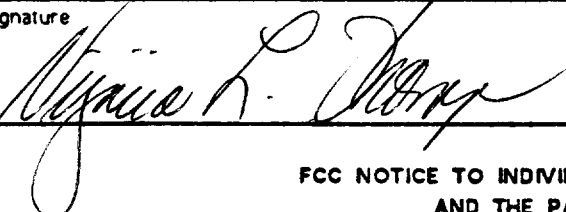
The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and that all exhibits are a material part hereof and incorporated herein.

The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

In accordance with 47 C.F.R. Section 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).**

I certify that the statements in this application are true and correct to the best of my knowledge and belief, and are made in good faith.

Name of Applicant State of Oregon Acting by and Through the State Board of Higher Education	Title Secretary of the Board
Signature 	Date June 23, 1992

**FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT  
AND THE PAPERWORK REDUCTION ACT**

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of this application is in the public interest. In reaching that determination, or for law enforcement purposes, it may be necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, processing of the application may be delayed or the application may be returned without action pursuant to the Commission's rules. Your response is required to obtain the requested authority.

Public reporting burden for this collection of information is estimated to vary from 78 to 302 hours 20 minutes with an average of 171 hours 36 minutes per response. These estimates include the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Information Resources Branch, Room 416, Paperwork Reduction Project, Washington, D.C. 20554, and to the Office of Management and Budget, Paperwork Reduction Project (3060-0034), Washington, D.C. 20503.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

<b>Section V-B - FM BROADCAST ENGINEERING DATA</b>	<b>FOR COMMISSION USE ONLY</b> File No. _____ ASB Referral Date _____ Referred by _____
----------------------------------------------------	--------------------------------------------------------------------------------------------------

Name of Applicant

STATE OF OREGON ACTING BY AND THROUGH THE STATE BOARD OF HIGHER EDUCATION

Call letters (if issued)  <div style="text-align: center; font-size: 1.2em;">K S K F</div>	Is this application being filed in response to a window? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, specify closing date: _____
--------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------

Purpose of Application: *(check appropriate boxes)*

- |                                                                                           |                                                                                     |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="checkbox"/> Construct a new (main) facility                                  | <input type="checkbox"/> Construct a new auxiliary facility                         |
| <input checked="" type="checkbox"/> Modify existing construction permit for main facility | <input type="checkbox"/> Modify existing construction permit for auxiliary facility |
| <input type="checkbox"/> Modify licensed main facility                                    | <input type="checkbox"/> Modify licensed auxiliary facility                         |

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

- |                                                               |                                                              |
|---------------------------------------------------------------|--------------------------------------------------------------|
| <input type="checkbox"/> Antenna supporting-structure height  | <input checked="" type="checkbox"/> Effective radiated power |
| <input type="checkbox"/> Antenna height above average terrain | <input type="checkbox"/> Frequency                           |
| <input type="checkbox"/> Antenna location                     | <input type="checkbox"/> Class                               |
| <input type="checkbox"/> Main Studio location                 | <input type="checkbox"/> Other <i>(Summarize briefly)</i>    |

File Number(s) BPED-870121MB, BMPED-880415MC AND BLED-890821KA

1. Allocation:

Channel No.	Principal community to be served:			Class <i>(check only one box below)</i>
215	City	County	State	<input type="checkbox"/> A <input type="checkbox"/> B1 <input type="checkbox"/> B <input type="checkbox"/> C3 <input type="checkbox"/> C2 <input checked="" type="checkbox"/> C1 <input type="checkbox"/> C <input type="checkbox"/> D
	KLAMATH FALLS	KLAMATH	OR	

2. Exact location of antenna.

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.

STUKEL MOUNTAIN, 18.5 KM FROM KLAMATH FALLS, OREGON ON A BEARING OF N141E DEGREES.

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array.

Otherwise, specify tower location. Specify South Latitude or East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed.

Latitude	42	°	05	'	50	"	Longitude	121	°	37	'	59	"
----------	----	---	----	---	----	---	-----------	-----	---	----	---	----	---

3. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? ☒ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both.

KLAD-FM, KDKF (TV) AND KFTS (TV)

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

NO CHANGE

4. Does the application propose to correct previous site coordinates?

☐ Yes ☒ No

If Yes, list old coordinates.

Latitude	--	0	--	'	--	"	Longitude	--	0	--	'	--	"
----------	----	---	----	---	----	---	-----------	----	---	----	---	----	---

5. Has the FAA been notified of the proposed construction?

☒ Yes ☐ No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Date JUNE 16, 1992

Office where filed

NORTHWEST MOUNTAIN REGION

RENTON, WASHINGTON

Exhibit No.

--

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway. NONE WITHIN 8 KM.

	Landing Area	Distance (km)	Bearing (degrees True)
(a)	KINGSLEY FIELD, OR	9.0	N302E
(b)	--	--	--

7. (a) Elevation: (to the nearest meter)

(1) of site above mean sea level;

1961.1 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and

49.7 meters

(3) of the top of supporting structure above mean sea level [(aX1) + (aX2)]

2010.8 meters

(b) Height of radiation center: (to the nearest meter) H = Horizontal; V = Vertical

(1) above ground

43.3 meters (H)43.3 meters (V)

(2) above mean sea level [(aX1) + (bX1)]

2004.4 meters (H)2004.4 meters (V)

(3) above average terrain

686.7 meters (H)686.7 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(bX3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No.  
E-1

9. Effective Radiated Power:

(a) ERP in the horizontal plane

6.50 kw (H)2.00 kw (V)

(b) Is beam tilt proposed?

☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No.

--

-- kw (H) -- kw (V)

\*Polarization

10. Is a directional antenna proposed?

☐ Yes ☒ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of horizontally and vertically polarized radiated components in terms of relative field.

Exhibit No.

--

11. Will the main studio be located within the 70 dBu or 3.16 mV/m contour?

☐ Yes ☒ No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125.

ON FILE, BPED-870121MB, No CHANGE.

Exhibit No.

--

12. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast *(except citizens band or amateur)* radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

☒ Yes ☐ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. (See 47 C.F.R. Sections 73.315(b), 73.316(d) and 73.318.)

Exhibit No.

E-2

13. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.

E-3

14. Attach as an Exhibit *(have the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.

E-4

(a) the proposed transmitter location, and the radials along with profile graphs have been prepared;

(b) the 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mV/m contour; and

(c) the legal boundaries of the principal community to be served.

15. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 13 737 sq. km.

Population 60 010

16. Attach as an Exhibit a map *(Sectional Aeronautical charts where obtainable)* showing the present and proposed 1 mV/m (60 dbu) contours.

PRESENT AREA = 9213 SQ. KM.

Enter the following from Exhibit above:

Gain Area 4524 sq. mi. KM

Loss Area 0 sq. mi. KM

Percent change (gain area plus loss area as percentage of present area) +49.1 %.

If 50% or more this constitutes a major change. Indicate in question 2(c), Section I, accordingly.

Exhibit No.

E-4

Exhibit No.  
--

17. For an application involving an auxiliary facility only, attach as an Exhibit a map (Sectional Aeronautical Chart or equivalent) that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675. (File No.:                     )

18. Terrain and coverage data (to be calculated in accordance with 47 C.F.R. Section 73.223).

Source of terrain data: (check only one box below)

☐

Linearly interpolated 30-second database

☒

7.5 minute topographic map

(Source:                     )

☐

Other (briefly summarize)

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1 mV/m contour 60 dBu (kilometers)
0	603.2	63.2
45	644.1	64.8
90	554.8	61.1
135	714.8	67.3
180	751.4	68.5
225	728.8	67.8
270	749.2	68.4
315	747.1	68.4
321	719.1	67.4

#### Allocation Studies

(See Subpart C of 47 C.F.R. Part 73)

19. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?

☐

Yes

☒

No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

Exhibit No.  
--

20. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada?

☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947.

Exhibit No.  
--

21. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following:

Exhibit No.  
E-5

- (a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
- (b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
- (c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
- (d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
- (e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
- (f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
- (g) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (h) The name of the map(s) used in the Exhibit(s).

22. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as an Exhibit information required in 1/ *(separation requirements involving intermediate frequency (i.f.) interference)*.

Exhibit No.  
E-5

23.(a) Is the proposed operation on Channel 218, 219, or 220?

☐ Yes ☒ No

(b) If the answer to (a) is yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207?

☐ Yes ☐ No

(c) If the answer to (b) is yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223.

Exhibit No.  
--

(d) If the answer to (b) is no, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.  
--

1/ A showing that the proposed operation meets the minimum distance separation requirements. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 6)

- (e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following: DOES NOT APPLY.

Exhibit No.  
--

- (1) Protected and interfering contours, in all directions (360 ), for the proposed operation.
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibit(s).

24. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525?

☐ Yes ☒ No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.  
--

25. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)?

☐ Yes ☒ No

If Yes, attach as an Exhibit information required in 1/. (Except for Class B (secondary) proposals.)

Exhibit No.  
--

26. Environmental Statement (See 47 C.F.R. Section 1.1301 et seq.)

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact?

☐ Yes ☒ No


If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.

Exhibit No.  
--

If No, explain briefly why not. SEE EXHIBIT E-6

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed) ROBERT A. MCCLANATHAN, P.E. MCCLANATHAN AND ASSOCIATES, INC.	Relationship to Applicant (e.g., Consulting Engineer) PROFESSIONAL ELECTRICAL ENGINEER
Signature 	Address (Include ZIP Code) P.O. Box 939 PORTLAND, OR 97207
Date JUNE 16, 1992	Telephone No. (Include Area Code) (503) 246-8080

**McCLANATHAN and ASSOCIATES, INC.**

PROFESSIONAL ELECTRICAL ENGINEERS  
P.O. BOX 939 - PORTLAND, OREGON 97207-0939  
TEL: (503) 246-8080 FAX: (503) 246-6304

**ENGINEERING STATEMENT**

for

**STATE OF OREGON ACTING BY AND THROUGH  
THE STATE BOARD OF HIGHER EDUCATION****KSKF, Klamath Falls, Oregon****FCC Form 340, Section V-B**

This statement and attached exhibits have been prepared for State of Oregon acting by and through the State Board of Higher Education relative to application to modify the construction permit for NCE FM broadcast station KSKF in Klamath Falls, Oregon.

The existing FCC permit, BPED-870121MB and BMPED-880415MC authorize construction on 90.0 MHz, FM channel 215, with an effective radiated power of 2.0 kilowatts horizontal and 1.65 kW vertical polarization. It is proposed to increase the antenna power to 6.5 kW horizontal and 2.0 kW vertical polarization. No other changes are requested. The presently authorized facilities have been constructed and application for license has been tendered, BLED-890821KA.

Exhibit E-1 is a sketch of the existing KSKF tower. The proposed antenna will be a four section elliptically polarized antenna, side mounted at the same vertical position as the existing four section antenna.

Exhibit E-2 is a statement by the Applicant accepting full responsibility for elimination of any objectionable interference to existing communications services if such should occur from the proposed operation.

Exhibit E-3A, a full scale portion of the 7.5 minute Lost River Geological Survey map, shows the existing KSKF tower location. There are no AM broadcast stations located within two miles of the FM antenna site. Exhibit E-3B is a reduced scale copy of the complete Lost River 7.5 minute topographic quadrangle map.

Exhibit E-4 shows the present and proposed 1.0 mV/m, 60 dBu contours. The area within the proposed 60 dBu contour is 49.1 percent greater than the present contour. All of the corporate city of Klamath Falls is located within the 60 dBu contour and is line-of-sight from the proposed antenna location.

Census facts for the population of the area enclosed within the proposed 60 dBu contour was provided by Dataworld, Inc. and is based on the 1990 U.S. Census. The areas within

the 60 dBu contours were measured with a compensating polar planimeter.

Exhibit E-5 is the frequency allocation study for FM channel 215. With the single exception of a new application on Ch. 215C2 at Redding, California, this study shows that there is no co-channel or adjacent channel FM station or Ch. 6 TV station that deserves detailed study since distance clearances between proposed and protected contours are considerable. The proposed increase in effective radiated power for KSKF is mutually exclusive with the application in Redding, FCC File No. BPED-920316ME and amendment 920528MA, since there is a prohibited overlap of contours specified in 47 C.F.R. 73.509(a). The cut-off date for the Redding application, BPED-920316ME, is July 2, 1992, FCC Report No. A-238.

Exhibit E-6 is a statement describing how the Applicant will comply with ANSI and FCC specified guidelines for human exposure to radio frequency radiation.

Since the Applicant proposes to increase antenna power, FAA Form 7460-1 has been prepared and submitted to the regional FAA office in Renton, Washington.

Respectfully submitted,



Robert A. McClanathan, P.E.  
McClanathan and Associates, Inc.  
Professional electrical Engineers

June 16, 1992

STATE OF OREGON       )  
                              ) SS:  
County of Multnomah)

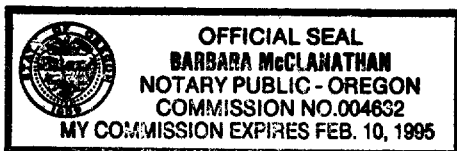
ROBERT A. McCLANATHAN, being duly sworn upon oath,  
deposes and says:

1. That he is President of McClanathan and Associates, Inc., Professional Electrical Engineers.
2. That he is a licensed Professional Electrical Engineer in the States of California, Oregon, Washington and the District of Columbia and that he is a member of the Association of Federal Communications Consulting Engineers.
3. That he has been engaged in radio and television broadcast engineering and developments since 1955.
4. That he has been retained by State of Oregon acting by and through the State board of Higher Education to prepare the engineering exhibits relative to application to modify the FM construction permit for NEC FM broadcast station KSKF in Klamath Falls, Oregon, on channel 215C1.

Affiant finally states that the material and exhibits contained in this report were prepared by him or under his direct supervision and that he has checked all results and believes them to be true.

*R. A. McClanathan*  
Robert A. McClanathan, P.E.

Subscribed and sworn to before me this 16th day of June, 1992.



*Barbara McClanathan*  
Notary Public, Oregon

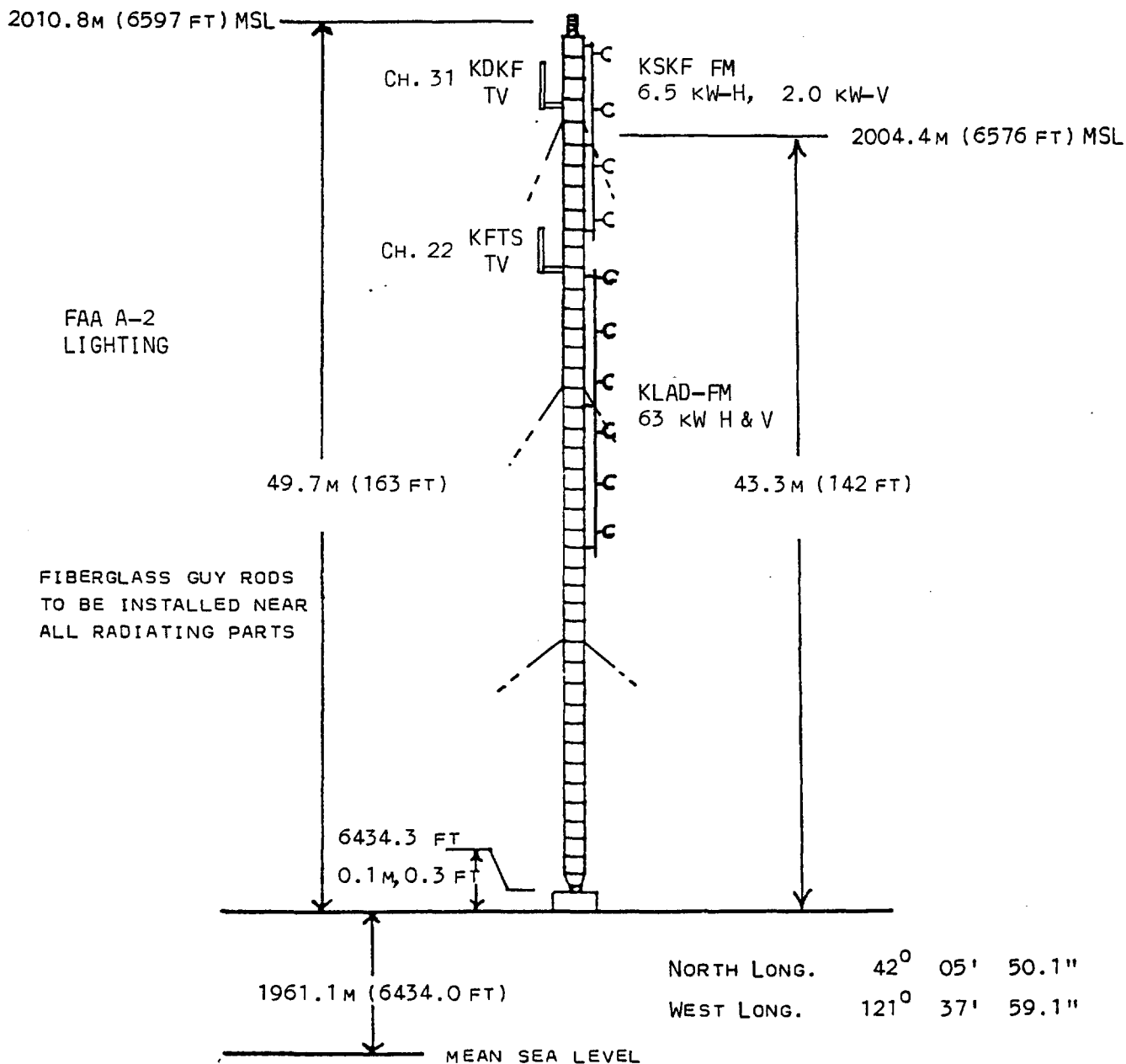
In and for the County of Multnomah, State of Oregon.

## INDEX TO EXHIBITS

<u>EXHIBIT</u>	<u>TITLE</u>
E-1	Vertical Sketch of Existing KSKF Tower and Four Section FM Antenna
E-2	Statement Concerning Radio Frequency Interference
E-3A	Transmitter Location Plotted on 7.5' USGS Map
E-3B	Reduced copy of Lost River, Oregon 7.5' USGS Map
E-5	Map of Present and Proposed 1 mV/m, 60 dBu Contours
E-6	Environmental Statement Concerning Human Exposure to Radio Frequency Radiation

EXHIBIT E-1

VERTICAL PLAN SKETCH OF EXISTING KSKF  
FM ANTENNA AND SUPPORTING TOWER  
KLAMATH FALLS, OREGON



**MCCLANATHAN & ASSOCIATES**

CONSULTING ELECTRONIC ENGINEERS

P. O. BOX 939

PORTLAND, OREGON 97207

6-16-92

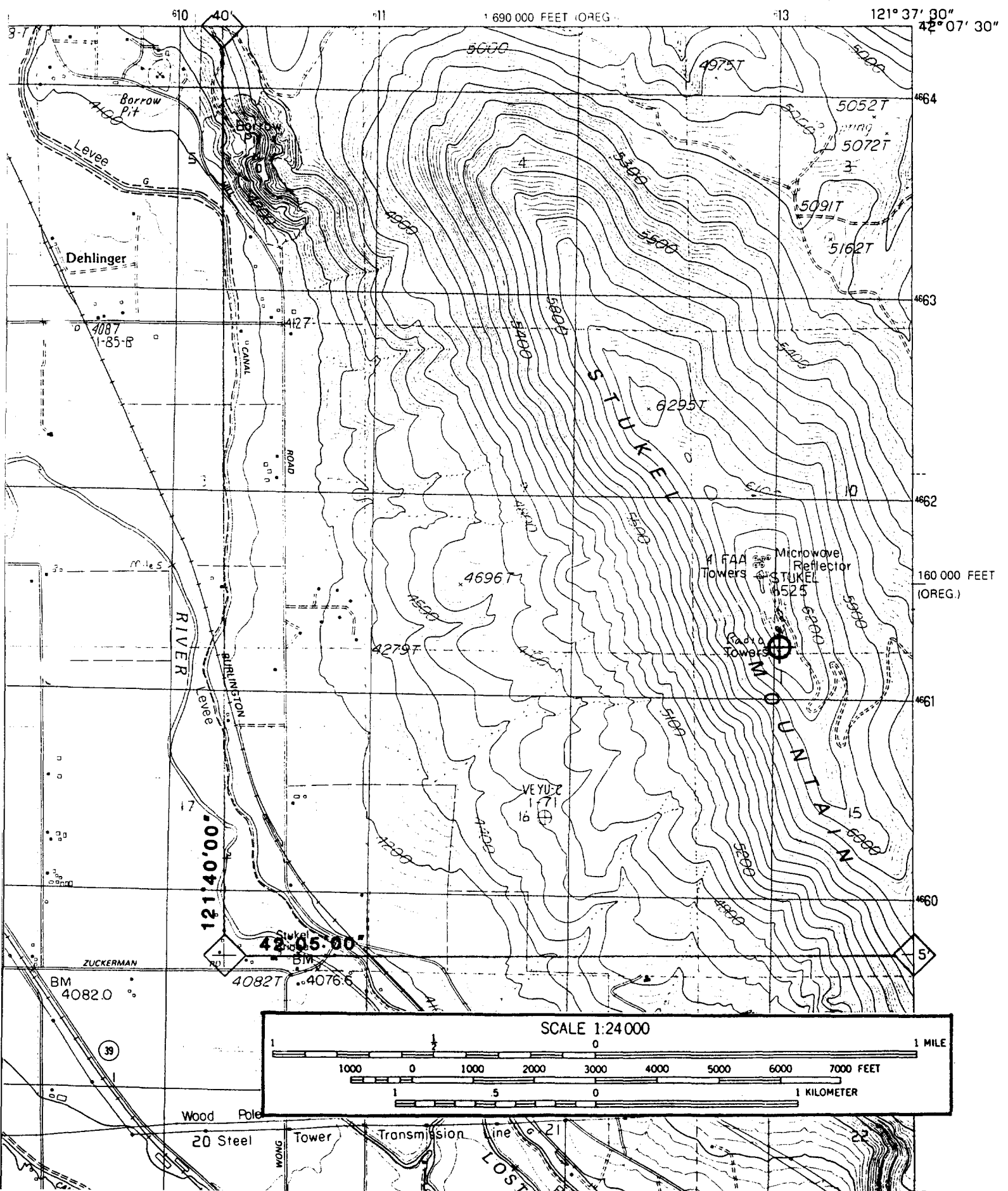
## EXHIBIT E-2

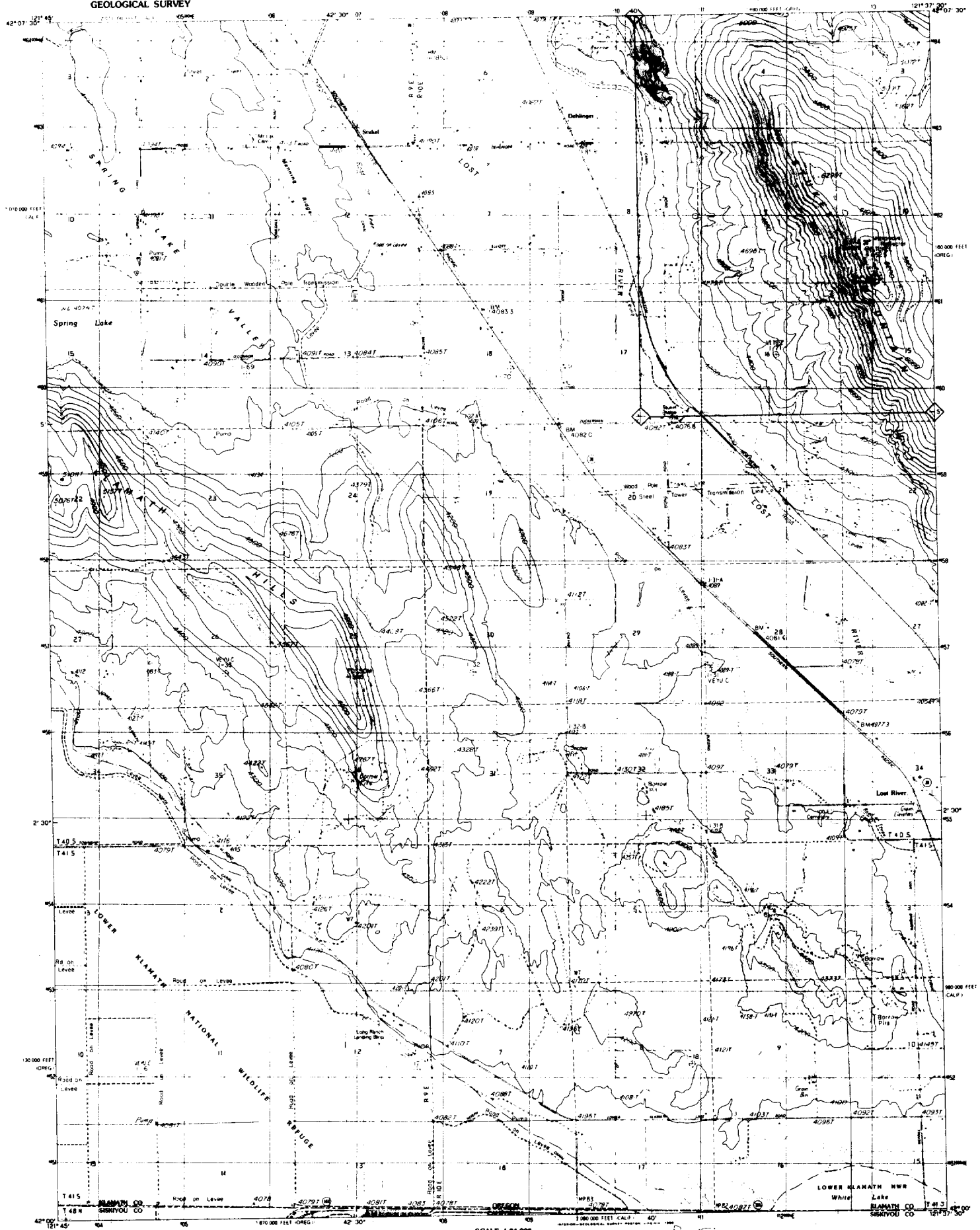
### STATEMENT CONCERNING RADIO FREQUENCY INTERFERENCE

The existing four section FM antenna is side mounted at the top of a 49.7 meter high guyed steel tower. The existing antenna ERP is 2.0 kilowatts with circular polarization. It is proposed to increase the antenna power to 6.5 kW in the horizontal polarization with the vertical polarization remaining at 2.0 kW ERP.

Because of the relatively low antenna power, it is believed that there will be no adverse effect on existing communications facilities located in the vicinity. The existing 2.0 kW ERP operation on 90.9 MHz has not caused any known interference to other radio communications. In the unpredictable event that intermodulation or other interference should occur as a result of the proposed operation, the Applicant accepts responsibility to immediately take action to correct such adverse conditions by means of standards types of cavity filters and traps.

**EXHIBIT E-3A**  
**LOST RIVER QUADRANGLE**  
**OREGON—CALIFORNIA**  
**7.5 MINUTE SERIES (TOPOGRAPHIC)**





PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY  
CONTROL BY COMPILED FROM AERIAL PHOTOGRAPHS TAKEN IN 1960  
FIELD CHECKED BY THE MAP SERIES SECTION  
PROJECTION LAMBERT CONFORMAL CONIC  
GEOGRAPHIC COORDINATE SYSTEM NAD 83  
HORIZONTAL DATUM NAD 83  
VERTICAL DATUM NGVD 29  
To place on the published North American Datum of 1983,  
move the projection lines as shown by double center ticks  
(10 meters north 10° latitude zone).  
There may be private subdivisions within the boundaries of any  
Federal and State Reservations shown on this map.

**PROVISIONAL**  
Produced from original  
manuscript drawings. Infor-  
mation shown as of date of  
field check.



1	2	3	4	5	6	7	8	9	10
Shoshone Falls	Shoshone Falls	Shoshone Falls	Shoshone Falls	Shoshone Falls	Shoshone Falls	Shoshone Falls	Shoshone Falls	Shoshone Falls	Shoshone Falls
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**ROAD LEGEND**  
Improved Road  
Unimproved Road  
Trail  
Interstate Route  
U.S. Route  
State Route  
**LOST RIVER, OREG.-CALIF.**  
PROVISIONAL EDITION 1986  
42121-AA-17-424

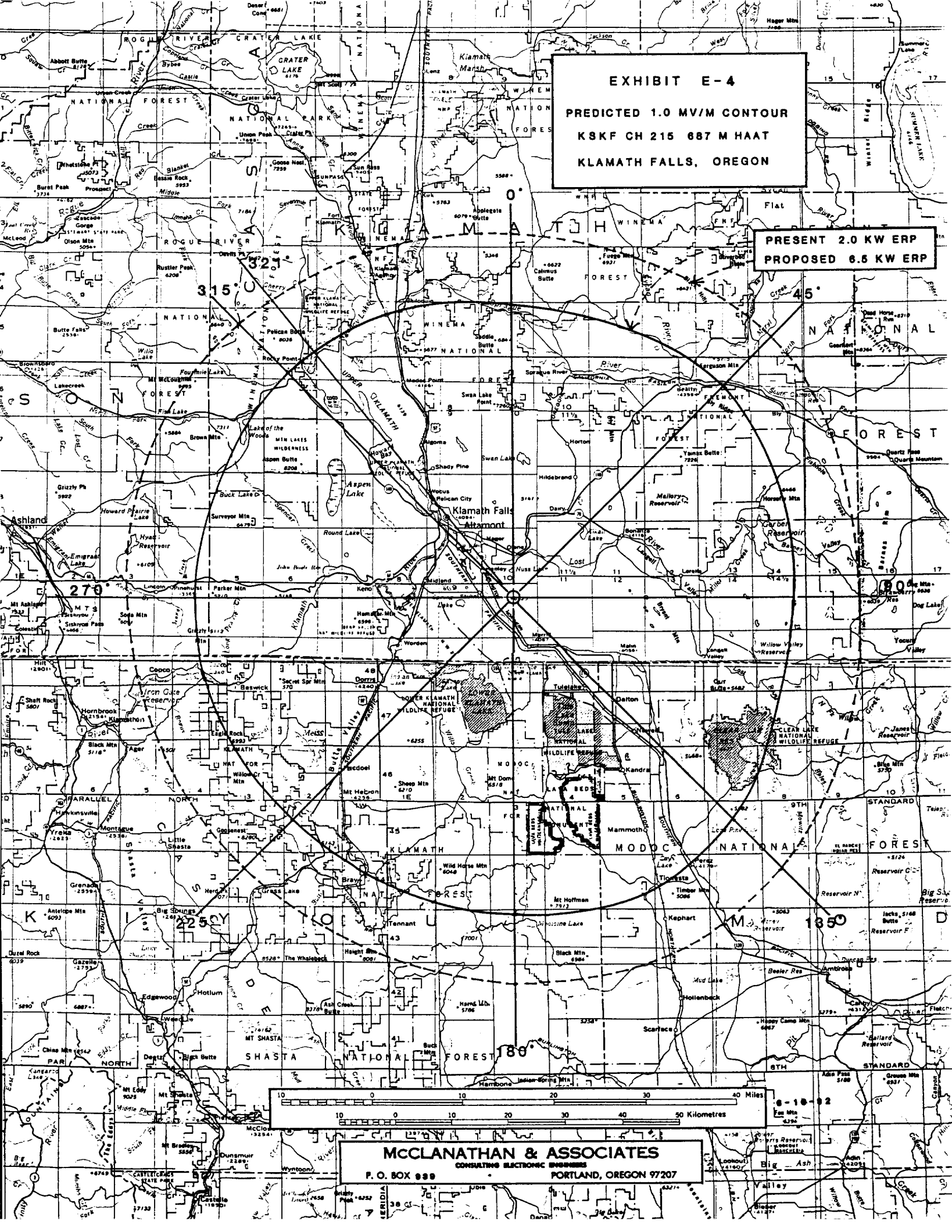


EXHIBIT E-4

PREDICTED 1.0 MV/M CONTOUR  
KSKF CH 215 687 M HAAT  
KLAMATH FALLS, OREGON

PRESENT 2.0 KW ERP  
PROPOSED 6.5 KW ERP

McCLANATHAN & ASSOCIATES

P. O. BOX 999 PORTLAND, OREGON 97207

# EXHIBIT E-5

McClanathan & Associates, Inc.  
Portland, Oregon

Page 1  
June 16, 1992

## FM Interference study

Title: KSKF  
Channel 215C1 ( 90.9 MHz) ERP: 6.50 kW; EAH: 687 m  
Database: FCC 04/28/92

Latitude: 42-05-50  
Longitude: 121-37-59  
Safety zone: 130 km

Call	Auth	Licensee name	Chan	ERP-kW	Latitude	Br-to	Dist.	Req.
City of License	St	FCC File no.	Freq	EAH-m	Longitude	-from	(km)	(km)
KVIQ	LIC	MILLER BROADCASTING COMP	6	100	40-43-36	232.8	247.8	161.6
EUREKA	CA		85.0	530	123-58-18	51.2	86.19	CLEAR
Proposed F(50,10) 74 dBu = 38.64 km; KVIQ F(50,50) 47 dBu = 123.0 km								
KIBC	LIC	Burney Educational B/Cin	*213C3	.41	40-52-29	184.9	136.3	75.26
Burney	CA		90.5	403	121-46-15	4.8	61.00	CLEAR
Proposed F(50,10) 80 dBu = 26.58 km; KIBC F(50,50) 60 dBu = 29.23 km								
Proposed F(50,50) 60 dBu = 66.29 km; KIBC F(50,50) 80 dBu = 8.973 km								
KZYY	LIC	Mendocino County Public	*214B	3.40	39-01-22	205.6	377.0	150.0
Philo	CA		90.7	514	123-31-17	24.4	227.0	CLEAR
Proposed F(50,10) 54 dBu = 97.63 km; KZYY F(50,50) 60 dBu = 52.37 km								
Proposed F(50,50) 60 dBu = 66.29 km; KZYY F(50,10) 54 dBu = 78.65 km								
KSKF	CP	State of Oregon	*215C1	2	42-05-50	.0		203.5
Klamath Falls	OR		90.9	687	121-37-59	.0	-204	SHORT
Proposed F(50,10) 40 dBu = 149.1 km; KSKF F(50,50) 60 dBu = 54.43 km								
Proposed F(50,50) 60 dBu = 66.29 km; KSKF F(50,10) 40 dBu = 129.6 km								
NEW	APC	California State Univers	*215C2	.60	40-36-10	207.4	186.5	201.4
Redding	CA		90.9	1083	122-38-58	26.7	-14.9	SHORT
Proposed F(50,10) 40 dBu = 149.1 km; NEW F(50,50) 60 dBu = 52.34 km								
Proposed F(50,50) 60 dBu = 66.29 km; NEW F(50,10) 40 dBu = 124.7 km								
KWAX	CP	Oregon State Board of Hi	*216C1	21.5	44-00-04	330.9	243.4	159.5
Eugene	OR		91.1	370	123-06-45	149.9	83.91	CLEAR
Proposed F(50,10) 54 dBu = 97.63 km; KWAX F(50,50) 60 dBu = 61.90 km								
Proposed F(50,50) 60 dBu = 66.29 km; KWAX F(50,10) 54 dBu = 90.60 km								
KWAX	LIC	Oregon State Board of Hi	*216C1	20	44-00-07	330.9	243.6	154.7
Eugene	OR		91.1	308	123-06-53	149.9	88.94	CLEAR
Proposed F(50,10) 54 dBu = 97.63 km; KWAX F(50,50) 60 dBu = 57.04 km								
Proposed F(50,50) 60 dBu = 66.29 km; KWAX F(50,10) 54 dBu = 83.57 km								
KIDE	LIC	Hoopa Tribal Broadcastin	*217A	.20	41-03-51	236.7	206.0	68.55
Hoopa	CA		91.3	-474	123-41-05	55.4	137.5	CLEAR
Proposed F(50,10) 80 dBu = 26.58 km; KIDE F(50,50) 60 dBu = 6.781 km								
Proposed F(50,50) 60 dBu = 66.29 km; KIDE F(50,50) 80 dBu = 2.265 km								
KSRS	LIC	St. of or Acting/St.Bd o	*218A	2	43-12-22	311.7	187.9	68.31
Roseburg	OR		91.5	93	123-21-48	130.5	119.6	CLEAR
Proposed F(50,50) 100 dBu = 5.096 km; KSRS F(50,50) 60 dBu = 21.27 km								
Proposed F(50,50) 60 dBu = 66.29 km; KSRS F(50,50) 100 dBu = 2.027 km								
KEKA-FM	LIC	Eureka Broadcasting Comp	268C	89	40-25-12	228.5	277.2	41
Eureka	CA	BLH-831212AA	101.5	625	124-05-00	46.9	236.2	CLEAR
DOC-82-749								
ALLOC			269A		39-35-03	150.5	319.1	22
Reno	NV		101.7		119-47-52	331.7	297.1	CLEAR
Coordinates updated from LIC record BLH860903KC								

>> End of channel 215C1 study <<

## EXHIBIT E-6

### ENVIRONMENTAL STATEMENT

An Environmental Assessment (EA) is categorically excluded under 47 C.F.R. Section 1.1306(b) of the FCC Rules and Regulations since the Applicant's proposal does not:

1. Involve a site location specified under 47 C.F.R. Section 1.1307(a)(1) through (7).

2. Involve high intensity lighting under 47 C.F.R. Section 1.1307(a)(8).

3. Result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in 47 C.F.R. Section 1.1307(b), (ANSI C95.1-1982 and ANSI C95.1-1991).

The Maximum Permissible Exposure (MPE) for uncontrolled environments at 90.9 MHz is  $0.2 \text{ mW/cm}^2$ . The distance D from the proposed FM antenna radiating a total of 8.5 kW (6.5 H and 2.0 V) ERP to the MPE point may be determined by the equation on page 9 of the FCC OST Bulletin No. 65 dated October 1985. The relative field strength at depression angles towards the ground for a four section antenna, as shown on the attached vertical field strength profile graph, will be less than 0.29. The MPE distance from this antenna for uncontrolled exposure is:

$$D^2 = \frac{(2.56)(1.64)(0.29)^2(8,500 \text{ watts})(1000 \text{ mW/W})}{4(3.1416)(0.2 \text{ mW/cm}^2)}$$

$$D = 1093 \text{ cm} = 10.9 \text{ meters}$$

The center of radiation for the four section FM antenna is 43.3 meters above ground level. Therefore, the proposed KSKF installation does comply with ANSI and FCC specified guidelines for uncontrolled human exposure to radio frequency radiation.

The Applicant owns the radio tower and associated equipment building and leases transmitter space in the building and antenna positions on the tower to other communications users. Collocated at this site are the transmitters for KLAD-FM, 63 kW ERP, KDKF TV, Ch. 31, 6 kW ERP and KFTS TV, Ch. 22, 9.33 kW ERP. Theoretical calculations of the total combined radio frequency field intensity at any point with acceptable accuracy is just not possible due the numerous RF sources, uncertain antenna radiation patterns and radiation reflections from tower, and building structures. Only on-site field intensity measurements will determine if any areas exceed the FCC

specified guidelines for human exposure to radio frequency radiation.

The Applicant proposes to measure the radio frequency field intensity with appropriate instruments during the equipment test period to determine what ground and building areas and heights on the tower experience levels that exceed the specified guidelines for human exposure to radio frequency radiation as described in OST Bulletin No. 65 and the American National Standard ANSIC95.1-1991. Such areas and heights on the tower that exceed the MPE for controlled exposure will be posted at the transmitter and tower facility.

The Applicant has a written condition in their agreement with lessees which requires that maintenance personnel terminate all RF emissions from the FM and TV antennas during any time when climbing the tower is necessary for inspections or maintenance within these posted areas. The licensee will post signs at the tower site stating "CAUTION - High Level Radio Frequency Energy Area - NO TRESPASSING". The tower structure will be fenced to prevent unauthorized access.

The area where the tower is located is a very remote site on Stukel Mountain not frequented by public visitors. There are two gates on the road to the site to limit access to authorized personnel. The tower area at the top of Stukel Mountain is confined along a narrow ridge. Where possible, all ground level areas that exceed specified maximum field intensity levels, as determined by measurements, will be fenced and posted with caution signs as described above. However, large area fencing around the tower is not practical. Therefore, if on-site measurements determine there are ground level areas where the total radio frequency power density exceeds the MPE for uncontrolled exposure that can not be fenced, the Applicant will post warning signs at the MPE boundary.

The Applicant believes there will be no significant effect on the human environment regarding public exposure or occasional visits by technical personnel and that fences and warning signs will be sufficient for proper notification of a potential hazard. The Applicant and its lessees understand that interruptions to normal radio transmissions will be necessary when maintenance personnel must work in posted areas on the ground and tower.

